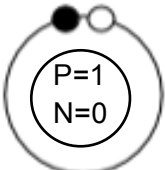


PERIODIC TABLE AND PERIODIC TRENDS REVIEW GUIDE

**A. In the boxes below draw the Bohr model for the type of atom indicated
BE SURE TO INDICATE THE NUMBER OF PROTONS AND NEUTRONS IN THE NUCLEUS!**

1	2	3 (13)
 H		
Li	Be	B
Na	Mg	Al
K	Ca	

B. Using the Bohr models on page 1 answer the following questions:

1. When moving across a row from left to right on the table the **number of shells** _____
(increases, decreases or stays the same)
2. When moving down a column on the table **the number of shells** _____
(increases, decreases or stays the same)
3. When moving across a row from left to right on the table the **number of protons** _____
(increases, decreases or stays the same)
4. When moving down a column on the table the **number of protons** _____
(increases, decreases or stays the same)
5. When moving across a row from left to right on the table the **atomic radius** _____
(increases, decreases or stays the same)
6. When moving down a column on the table the **atomic radius** _____
(increases, decreases or stays the same)
7. When moving across a row from left to right on the table the **number of valence electrons** _____
(increases, decreases or stays the same)
8. When moving down a column on the table the **number of valence electrons** _____
(increases, decreases or stays the same)

Do not refer to the Bohr models for #9 & 10

9. When moving across a row from left to right on the table the **reactivity of atoms** _____
(increases, decreases or stays the same)
10. When moving down a column on the table the **reactivity of atoms** _____
(increases, decreases or stays the same)

Physical Science

DSHS

Name _____

Period _____

C. Answer the following questions:

11. Explain why the atomic radius decreases from left to right on the periodic table (be sure to include something about the attractive forces between protons and neutrons)

12. Chemical reactions involve electrons (being given away, taken or shared) we will talk about that more later. Why do atoms in the same group / family (column) share similar chemical properties?

13. The periodic table developed by _____ ordered the elements according to **atomic mass**.

14. In general the mass of different elements increase on the periodic table from left to right and from top to bottom.

a) Give one counter example of this trend:

b) Why is mass an unreliable property to order the elements on the periodic table? (be sure to include something about isotopes)

15. The periodic table developed by Dmitri Mendeleev was useful because Mendeleev left gaps in the elements that were _____ to be found.

16. The scientist who ordered the periodic table based on the number of protons or the **atomic number** was _____.

17. Explain why it makes more sense to order the periodic table according to elements **atomic number** or **number of protons**?

DSHS

Period _____

e. Noble Gases

The image shows a blank periodic table grid. It consists of a main body with 18 columns and 7 rows, and a separate section below for the lanthanide and actinide series. The main body is divided into four groups: Group 1 (1 column), Groups 2-10 (10 columns), Group 11 (1 column), and Groups 12-18 (6 columns). The separate section below has 14 columns and 2 rows.

c. Non-metals

A blank periodic table grid. The main body consists of 18 columns and 7 rows. The first two columns are on the left, and the last two columns are on the right. The middle 14 columns form a single block. Below the main body, there are two additional rows of 14 columns each, representing the lanthanide and actinide series. These two rows are positioned between the 4th and 5th rows of the main body.

Physical Science

DSHS

Name _____

Period _____

F. Answer the following questions about the periodic table:

18. A group or column (top to bottom) on the periodic table is called a: _____

19. A row (left to right) on the periodic table is called a: _____

20. The most reactive elements on the periodic table are in the _____
family or group _____.

21. Elements in groups 1 and 2 are not found in nature alone because they are so _____.

22. The transition metals can be identified by a characteristic _____. Examples of transition metals are copper, silver and gold.

23. Elements that touch the “stair case” are called _____.

24. Metalloids are between metals and non-metals on the periodic table... this makes sense because they: _____

25. The Halogens are known as “_____” anytime they combine with a metal they form a salt.

26. The noble gases are _____ so they are often found in nature and are safe to use in advertising signs.

27. List 5 properties of metals

- | | |
|----|----|
| 1. | 4. |
| 2. | 5. |
| 3. | |

28. List 5 properties of non-metals

- | | |
|----|----|
| 1. | 4. |
| 2. | 5. |
| 3. | |

Physical Science**Name** _____

DSHS

Period _____

G. Answer the following questions about IONS:

29. An atom that carries a charge is called an _____.

30. If an atom has more electrons than protons its charge is _____.

31. If an atom has less electrons than protons its charge is _____.

32. A negatively charged ion is called a _____.

33. A positively charged ion is called a _____.

34. Metals tend to _____ electrons away.

35. Non-metals tend to _____ electrons.

H. Fill in the table below:

Element	Atomic Symbol	Total # of Electrons	# of Valence Electrons	# of Electrons Gained or Lost	Oxidation Number
Bromine					
Lithium					
Calcium					
Sulfur					
Boron					
Silicon					
Phosphorus					